

SEQUENCE LISTING

<110> Marks, Daniel L.
Cone, Roger D.

<120> Methods and Reagents for Discovering and Using
Mammalian Melanocortin Receptor Antagonists to Treat
Cachexia

<130> 96-886

<140> 08/706,281
<141> 1996-09-04

<160> 10

<170> PatentIn Ver. 2.0

<210> 1
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<212> DNA
<213> Homo sapiens

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<222> (394)..(1389)

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agtgagaaca agaaagcaaa gagcagactc tttcaactga gaatgaatat tttgaagccc 180
aagattttaa cgtgatgatg attagagtcg tacctaaaag agactaaaaa ctccatgtca 240
agctctggac ttgtgacatt tactcacagc aggcatggca attttagcct cacaactttc 300
agacagataa agacttggag gaaataactg agacgactcc ctgaccagg aggttaaatac 360
aattcagggg gacactggaa ttctcctgcc agc atg gtg aac tcc acc cac cgt 414
Met Val Asn Ser Thr His Arg
1 5

ggg atg cac act tct ctg cac ctc tgg aac cgc agc agt tac aga ctg 462
Gly Met His Thr Ser Leu His Leu Trp Asn Arg Ser Ser Tyr Arg Leu
10 15 20

cac agc aat gcc agt gag tcc ctt gga aaa ggc tac tct gat gga ggg 510
His Ser Asn Ala Ser Glu Ser Leu Gly Lys Gly Tyr Ser Asp Gly Gly
25 30 35

tgc tac gcg caa ctt ttt gtc tct cct gag gtg ttt gtg act ctg ggt 558
Cys Tyr Ala Gln Leu Phe Val Ser Pro Glu Val Phe Val Thr Leu Gly
40 45 50 55

gtg atc agc ttg ttg gag aat atc tta gag att gtg gca ata gcc aag 606

Val Ile Ser Leu Leu Glu Asn Ile Leu Glu Ile Val Ala Ile Ala Lys			
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aac aag aat ctg cat tca ccc atg tac ttt ttc atc tgc agc ttg gct			654
Asn Lys Asn Leu His Ser Pro Met Tyr Phe Phe Ile Cys Ser Leu Ala			
75	80	85	
gtg gct gat atg ctg gtg agc gtt tca aat gga tca gaa acc att atc			702
Val Ala Asp Met Leu Val Ser Val Ser Asn Gly Ser Glu Thr Ile Ile			
90	95	100	
atc acc cta tta aac cgt aca gat acg gat gca cag agt ttc aca gtg			750
Ile Thr Leu Leu Asn Arg Thr Asp Thr Asp Ala Gln Ser Phe Thr Val			
105	110	115	
aat att gat aat gtc att gac tcg gtg atc tgt agc tcc ttg ctt gca			798
Asn Ile Asp Asn Val Ile Asp Ser Val Ile Cys Ser Ser Leu Leu Ala			
120	125	130	135
tcc att tgc agc ctg ctt tca att gca gtg gac agg tac ttt act atc			846
Ser Ile Cys Ser Leu Leu Ser Ile Ala Val Asp Arg Tyr Phe Thr Ile			
140	145	150	
ttc tat gct ctc cag tac cat aac att atg aca gtt aag cgg gtt ggg			894
Phe Tyr Ala Leu Gln Tyr His Asn Ile Met Thr Val Lys Arg Val Gly			
155	160	165	
atc agc ata agt tgt atc tgg gca gct tgc acg gtt tca ggt att ttg			942
Ile Ser Ile Ser Cys Ile Trp Ala Ala Cys Thr Val Ser Gly Ile Leu			
170	175	180	
ttc atc att tac tca gat agt agt gct gtc atc atc tgc ctc atc acc			990
Phe Ile Ile Tyr Ser Asp Ser Ser Ala Val Ile Ile Cys Leu Ile Thr			
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atg ttc ttc acc atg ctg gct ctc atg gct tct ctc tat gtc cac ctg			1038
Met Phe Phe Thr Met Leu Ala Leu Met Ala Ser Leu Tyr Val His Leu			
200	205	210	215
ttc ctg atg gcc agg ctt cac att aag agg att gct gtc ctc ccc ggc			1086
Phe Leu Met Ala Arg Leu His Ile Lys Arg Ile Ala Val Leu Pro Gly			
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act ggt gcc atc cgc caa ggt gcc aat atg aag gga gcg att acc ttg			1134
Thr Gly Ala Ile Arg Gln Gly Ala Asn Met Lys Gly Ala Ile Thr Leu			
235	240	245	
acc atc ctg att ggc gtc ttt gtt gtc tgc tgg gcc cca ttc ttc ctc			1182
Thr Ile Leu Ile Gly Val Phe Val Val Cys Trp Ala Pro Phe Phe Leu			
250	255	260	
cac tta ata ttc tac atc tct tgt cct cag aat cca tat tgt gtg tgc			1230
His Leu Ile Phe Tyr Ile Ser Cys Pro Gln Asn Pro Tyr Cys Val Cys			
265	270	275	
ttc atg tct cac ttt aac ttg tat ctc ata ctg atc atg tgt aat tca			1278
Phe Met Ser His Phe Asn Leu Tyr Leu Ile Leu Ile Met Cys Asn Ser			

280	285	290	295	
atc atc gat cct ctg att tat gca ctc cg ^g agt caa gaa ctg agg aaa Ile Ile Asp Pro Leu Ile Tyr Ala Leu Arg Ser Gln Glu Leu Arg Lys 300				1326
305				310
acc ttc aaa gag atc atc tct tcc tat ccc ctg gga ggc ctt tgt gac Thr Phe Lys Glu Ile Ile Ser Ser Tyr Pro Leu Gly Gly Leu Cys Asp 315				1374
320				325
ttg tct agc aga tat taaaatgggga cagagcacgc aatataggaa catccataag Leu Ser Ser Arg Tyr 330				1429
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Glu Val Phe Val Thr Leu Gly Val Ile Ser Leu Leu Glu Asn Ile Leu 50 55 60				
Glu Ile Val Ala Ile Ala Lys Asn Lys Asn Leu His Ser Pro Met Tyr 65 70 75 80				
Phe Phe Ile Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser 85 90 95				
Asn Gly Ser Glu Thr Ile Ile Ile Thr Leu Leu Asn Arg Thr Asp Thr 100 105 110				
Asp Ala Gln Ser Phe Thr Val Asn Ile Asp Asn Val Ile Asp Ser Val 115 120 125				
Ile Cys Ser Ser Leu Leu Ala Ser Ile Cys Ser Leu Leu Ser Ile Ala 130 135 140				

Val Asp Arg Tyr Phe Thr Ile Phe Tyr Ala Leu Gln Tyr His Asn Ile
 145 150 155 160
 Met Thr Val Lys Arg Val Gly Ile Ser Ile Ser Cys Ile Trp Ala Ala
 165 170 175
 Cys Thr Val Ser Gly Ile Leu Phe Ile Ile Tyr Ser Asp Ser Ser Ala
 180 185 190
 Val Ile Ile Cys Leu Ile Thr Met Phe Phe Thr Met Leu Ala Leu Met
 195 200 205
 Ala Ser Leu Tyr Val His Leu Phe Leu Met Ala Arg Leu His Ile Lys
 210 215 220
 Arg Ile Ala Val Leu Pro Gly Thr Gly Ala Ile Arg Gln Gly Ala Asn
 225 230 235 240
 Met Lys Gly Ala Ile Thr Leu Thr Ile Leu Ile Gly Val Phe Val Val
 245 250 255
 Cys Trp Ala Pro Phe Phe Leu His Leu Ile Phe Tyr Ile Ser Cys Pro
 260 265 270
 Gln Asn Pro Tyr Cys Val Cys Phe Met Ser His Phe Asn Leu Tyr Leu
 275 280 285
 Ile Leu Ile Met Cys Asn Ser Ile Ile Asp Pro Leu Ile Tyr Ala Leu
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 Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys Glu Ile Ile Ser Ser Tyr
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 Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser Arg Tyr
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<220>
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<220>
 <221> misc_feature
 <222> (23)..(24)
 <223> "n" is inosine

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35

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<211> 32
<212> DNA
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<220>
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oligonucleotide primer

<220>
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32

<210> 5
<211> 7
<212> PRT
<213> Artificial Sequence

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<221> SITE
<222> (1)
<223> "Xaa" is norleucine

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<222> (4)
<223> "Xaa" is naphthyl-D-alanine

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cyclized between the epsilon amino group of the
lysine and the sidechain carboxyl group of the
aspartic acid

<400> 5
Xaa Asp His Xaa Arg Trp Lys
1 5

<210> 6
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<220>
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<210> 7

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<212> DNA
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<220>
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<212> DNA
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ccatccccgg gc 72

<210> 10
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<220>
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